



eGlobal Technical Environment

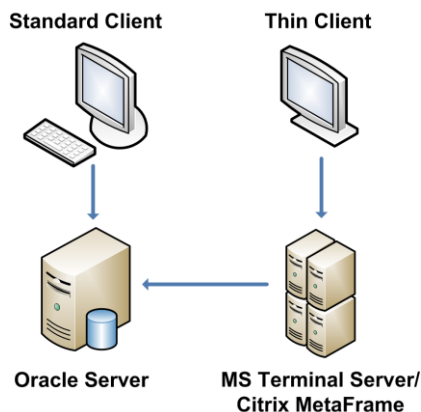
Overview

This document describes the technical architecture of Ebix eGlobal version 7.02.00 and provides deployment options. Ebix eGlobal version 7.02.00 is a two (2) tier client server application developed using Microsoft Visual Studio and supported by an Oracle database.

The application layer of version 7.02.00 is a hybrid release developed in Microsoft Visual Basic 6.0, Visual Basic .Net and C#. This version is a transition release commencing the migration from Visual Basic 6.0 to a .Net environment. The application layer will be progressively migrated to .Net using n-tier architecture to replace the current two (2) tier architecture.

Deployment

Application implementation options for version 7.02.00 are conventional Client or Terminal Services technology. The latter recommended for large scale installations.



Accreditation testing has been completed for both Microsoft Terminal Services and Citrix MetaFrame/Xenapp. The latter offers improved performance over a wide area network and printer support improvements.

Client Workstations

The recommended minimum workstation for a standard Client deployment is a current generation PC with 1GB RAM (Windows XP) to 4GB RAM (Windows 7), however as with all new generation GUI software the faster the processor and the more memory that can be allocated to the system the better the performance.

Processor and memory requirements will be impacted by the mix of other applications processed by the workstation. Windows XP Professional and Windows 7 Professional are the recommendation operating systems.

Thin Client Environment

A Terminal Server environment is recommended for eGlobal installations to overcome the administrative overheads associated with conventional client/server application deployments. Support for eGlobal has been verified for Microsoft Terminal Server and Citrix XenApp/MetaFrame Server.



Advantages

- Centralised management of applications
- Application performance monitoring
- Access Security and Control
- Version Control and Application delivery

Server/Server Farm configuration guidelines can be found at: microsoft.com and citrix.com.

Server Hardware

Oracle is supported by a wide range of hardware and operating system environments, for a detailed list of currently supported environments see oracle.com. In the main eGlobal Oracle implementations have been based on a Microsoft Windows Server platform.

The eGlobal Oracle database will hold all broking system and financial data.

General Guidelines

- Current Generation Intel Xeon fileserver
- 4-8GB RAM
- High Speed RAID Configuration Disk Storage
- CD-ROM Drive
- 10/100 Network Interface Card
- Tape Back-up Drive
- UPS Power Protection
- Microsoft Windows 2003/2008 Server
- Back-up Software

The database server will be the critical component of the network, server planning should include a review of reliability factors such as RAID disk technology, tape back-up strategy, power protection and disaster contingency planning.

Server Software

In addition to the operating system, the following software components are required for the database server:

- Microsoft Internet Information Services (IIS)
- Microsoft .Net 2.0 Framework
- Microsoft Data Access Component 2.70 (MDAC)
- Microsoft Virtual Directory

Printers

All printers to be used for eGlobal processing should be PCL compatible or Postscript laser printers, printers should be configured with a network card or attached to a print server PC and not attached directly to the server. Printers can be configured with multiple printer bins to increase paper handling flexibility.

Printing of documentation within the application is either a direct print operation or controlled by a print queue. The latter is the recommended approach and requires a dedicated PC, minimum configuration is a system with a network card running Windows XP Professional.

Third Party Software

Client and insurer documentation, standard letters and other merge documents are designed to interface with Microsoft Word. In addition eGlobal utilises Microsoft Excel for certain client schedule applications and export options for all reports. All workstations requiring access to eGlobal should have a copy of Microsoft Office installed.

Included with the system is a suite of operational, management and audit reports, additional reports can be developed using the eGlobal Report Writer or any third party report writer offering support for an Oracle database. Crystal Reports is recommended.



Web Service Interface

Third party data exchange is available through the Web Services interface. At the centre of Web Services is a messaging layer that connects the eGlobal application with external systems. The application exposes message acceptance services as XML Web Services that are invoked by the sending/calling application. The XML schema for messaging (both request and response) is derived from the eGlobal database schema, only XML data formats are supported.

To handle different XML formats and to support other data formats, a separate exchange has been developed as a wrapper that will require mapping of sender's information to the eGlobal XML schema.

The services to be exposed from eGlobal application include services to handle:

- Enquiries
- Policy Bind requests
- Policy Adjustment requests
- Policy Cancellation requests
- Renewal requests
- Reinstatement requests
- Claim Notifications
- Documents with Attachments

To handle messages with attachments specifically at the time of sending a response, Direct Internet Message Encapsulation (DIME) is used. A DIME message is composed of one or more DIME records in a binary message format that can encapsulate multiple application-defined attachments of arbitrary type and size into a single message construct.

It is assumed that messaging is enabled point-to-point with trusted third-party systems and no intermediary will be involved. This makes security less complicated. Transactions with third-parties should be based on WS-Security standard whereby messages will be sent securely

using SSL to have a secure transport – it does not provide the message-level security.

Point-to-point messaging provides message-level security which can be provided on a case-to-case basis where message-level WS-Security standards can be used. These standards could be authentication through various credential tokens including username/password, certificates, or through XML Encryption, or through XML Digital Signature.

Service-Oriented Approach

A service-oriented architecture approach has been adopted for eGlobal. The main advantage of the service-oriented approach is deployment flexibility; the application layer can be deployed across different client types. This allows different data schemas to be used on the client than on the server, and transforms the data at the client. The client and server components can be updated independently.

Features

- Asynchronous communication
- Minimising complex network interactions
- Adding data caching capabilities
- Managing connections
- Designing store-and-forward Mechanisms

Database

An Oracle 10i or 11g database licence is required. Oracle can be licensed on a named user or processor basis. Oracle server databases are licensed either by the number of Named Users or for unlimited access based on the number of installed sockets or processors (after allowing for multi-core) in the server(s).

Named User Licences are by default multi-server, which means as long as the minimums are met,

eGlobal Technical Environment



licensed users can use applications that access Oracle databases on many servers. Named User Licences are defined as everyone, including non-human devices that will cause an interaction with the Oracle database. The users and applications could be anywhere, directly or indirectly accessing the Oracle database. Oracle does not provide concurrent user licensing.